

# CITY OF ALBUQUERQUE

Planning Department  
Brennon Williams, Interim Director



Mayor Timothy M. Keller

August 28, 2018

Jeremy Shell  
Respec  
5971 Jefferson St. NE  
Albuquerque, NM 87109

**RE: Adagio Apartments  
Tr A, Cantata at the Trails Unit 2  
Conceptual Grading Plan Stamp Date: 8/16//19  
Drainage Report Stamp Date: 8/16/19  
Hydrology File: C09D014**

Dear Mr. Shell:

PO Box 1293

Based on the submittal received on 8/19/19, the Conceptual Grading and Drainage Plan is approved for Site Plan.

Albuquerque

Prior to Building Permit (For Information):

NM 87103

www.cabq.gov

1. Remove all "Conceptual" markings.
2. Required SWQV needs to be calculated for the impervious area only. It looks like you multiplied .34/12" by the entire basin areas.
3. Payment in Lieu (Amount =  $1,827\text{CF} \times \$8/\text{CF} = \$14,613$ , per sheet C-102- Basin1.2) of onsite management of the SWQV must be made. Take three copies of the treasury deposit slip to the Treasury and then include one copy of the paid deposit slip when resubmitting.
4. Include project benchmark and datum (all elevations need to be in NAVD88).
5. A separate bound Drainage Report is recommended, due to the breadth of this project.
6. Please show and label the pond(s) and include a label on each with the SWQV and elevation, the 100-year volume and elevation, the peak 100 year inflow and outflow, the spillway crest elevation, and the spillway flow depth.
7. The site must demonstrate adequate downstream capacity per § 14-5-2-12(G) of the Albuquerque Code of Ordinances. 10 cfs discharge to the storm drain is identified, but the controlling feature needs to be identified and designed.

# CITY OF ALBUQUERQUE

Planning Department  
Brennon Williams, Interim Director



Mayor Timothy M. Keller

8. This site must also comply with the approved drainage master plan (Thompson, 2015) for the Trails. The proposed plan seems to be generally consistent, but this needs to be investigated and discussed.
9. Drainage conveyance for basins 2-4 needs to be further detailed at the time of building permit with details such as low points or drain lines for the sidewalks along with swales
10. Hydraulic calculations are missing, to include:
  - a. Provide street capacity analysis demonstrating that the 100-year HGL remains at/below top of curb.
  - b. Provide inlet calculations, including 2x capacity (50% clogging factor) for inlets in a sump. For orifice calculations, the open area (or void space) for the new bike-friendly Albuquerque grate (Dwg 2220) is 3.72sf. Please ensure you orifice calculations are updated to reflect this.
  - c. Provide hydraulic calculations for this proposed storm drain system, calculated along the Energy Grade Line; include both the HGL and EGLs in the table.
  - d. Pond routing as necessary.

PO Box 1293

11. A waterblock, 0.87' high, per COA Paving Detail No. 2426, is required at the driveway entrance; include spot elevations at the high point and flowline.

Albuquerque

Prior to Certificate of Occupancy (For Information):

NM 87103

12. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.

www.cabq.gov

13. A Bernalillo County Recorded [Drainage Covenant \(No Public Easement\)](#) is required for the stormwater detention pond and orifice plate and the SWQ ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee (\$25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.  
Senior Engineer, Planning Dept.  
Development Review Services



**CITY OF ALBUQUERQUE**  
Comments from  
Planning Department  
Conceptual Grading, Drainage, & Utility Plan  
Adagio Apartments  
Tract A, Cantana at the Trails Unit 2  
Prepared By  
RESPEC, Dated August 2019



Based on the submittal received by the Planning Department on 7/19/19, RESPEC received the following comments below from Dana Peterson, P.E., Senior Engineer, Planning Department. Our responses to the comments are provided below each comment in *italics* font.

Comment:

1. Please provide an engineer's stamp with a signature and date on the plan and use the [current DTIS version](#) (11/2018) when resubmitting.

*Response:*

*We will resubmit the plans with a signed and dated engineer's stamp and utilize the current DTIS version.*

Comment:

2. Identify all existing drainage easements on the plan, as well as any proposed easements, vacations, and lot line adjustments.

*Response:*

*All existing drainage easements, proposed easements, vacations, and lot line adjustments have been identified on the plans.*

Comment:

3. Identify all drainage infrastructure as private vs. public.

*Response:*

*All drainage infrastructure as private.*

Comment:

4. Include project benchmark and datum.

*Response:*

*Project benchmark and datum included. See revised sheet C-101.*

Comment:

5. Provide a copy of the Grading and Drainage plan to AMAFCA; AMAFCA approval may be required.

*Response:*

*A copy of the Grading and Drainage plan was submitted to AMAFCA with the submittal to DRB. AMAFCA had no comments.*

Comment:

6. Please provide a vicinity map showing the location of the site. Typically this is the Zone Atlas. This can be downloaded in pdf format from the City of Albuquerque's website.

*Response:*

*A vicinity map showing the location of the site has been included. See revised sheet C-101.*

Comment:

7. A separate bound Drainage Report is recommended, due to the breadth of this project.

*Response:*

*A bound Drainage Report will be included with the building permit submittal at that time.*

Comment:

8. Provide one (or several large) central facility for Stormwater Quality volume (SWQV) retention; individual ponds for each apartment unit will not be accepted.

*Response:*

*Central facilities for SWQV retention have been provided. See revised sheets.*

Comment:

9. Please provide the SWQV calculations for each basin draining to each pond. The stormwater quality ponds need to be sized for the areas draining to them.

*Response:*

*SWQV calculations for each basin draining to each pond have been provided. See revised sheet C-102.*

Comment:

10. Please show and label the pond(s) and include a label on each with the SWQV and elevation, the 100-year volume and elevation, the peak 100 year inflow and outflow, the spillway crest elevation, and the spillway flow depth.

*Response:*

*We will provide this information with the building permit submittal.*

Comment:

11. The site must demonstrate adequate downstream capacity per § 14-5-2-12(G) of the Albuquerque Code of Ordinances. 10 cfs discharge to the storm drain is identified, but how will runoff be controlled?... pond, orifice plate, detention in the drive aisles? The controlling feature needs to be identified and designed.

*Response:*

*We will include this detail with the building permit submittal.*

Comment:

12. This site must also comply with the approved drainage master plan (Thompson, 2015) for the Trails. The proposed plan seems to be generally consistent, but this needs to be investigated and discussed.

*Response:*

*The site will comply with the approved drainage master plan (Thompson, 2015).*

Comment:

13. Drainage conveyance for basins 2-4 is questionable. Will these basins actually make it to the drive aisles? If so how? Can you add low points or drain lines for the sidewalks, along with swales? You could also treat these areas as contiguous self-ponding areas, coupled with drainage covenants. This would also enable basin 1 to free discharge.

*Response:*

*Additional flow arrows have been added to revised sheet C-102 to provide clarity on drainage conveyance.*

Comment:

14. Hydraulic calculations are missing, to include:

- a. Provide street capacity analysis demonstrating that the 100-year HGL remains at/below top of curb.
- b. Provide inlet calculations, including 2x capacity (50% clogging factor) for inlets in a sump. For orifice calculations, the open area (or void space) for the new bike-friendly Albuquerque grate (Dwg 2220) is 3.72sf. Please ensure you orifice calculations are updated to reflect this.
- c. Provide hydraulic calculations for this proposed storm drain system, calculated along the Energy Grade Line; include both the HGL and EGLs in the table.
- d. Pond routing as necessary.

*Response:*

*We will provide this information with the building permit submittal.*

Comment:

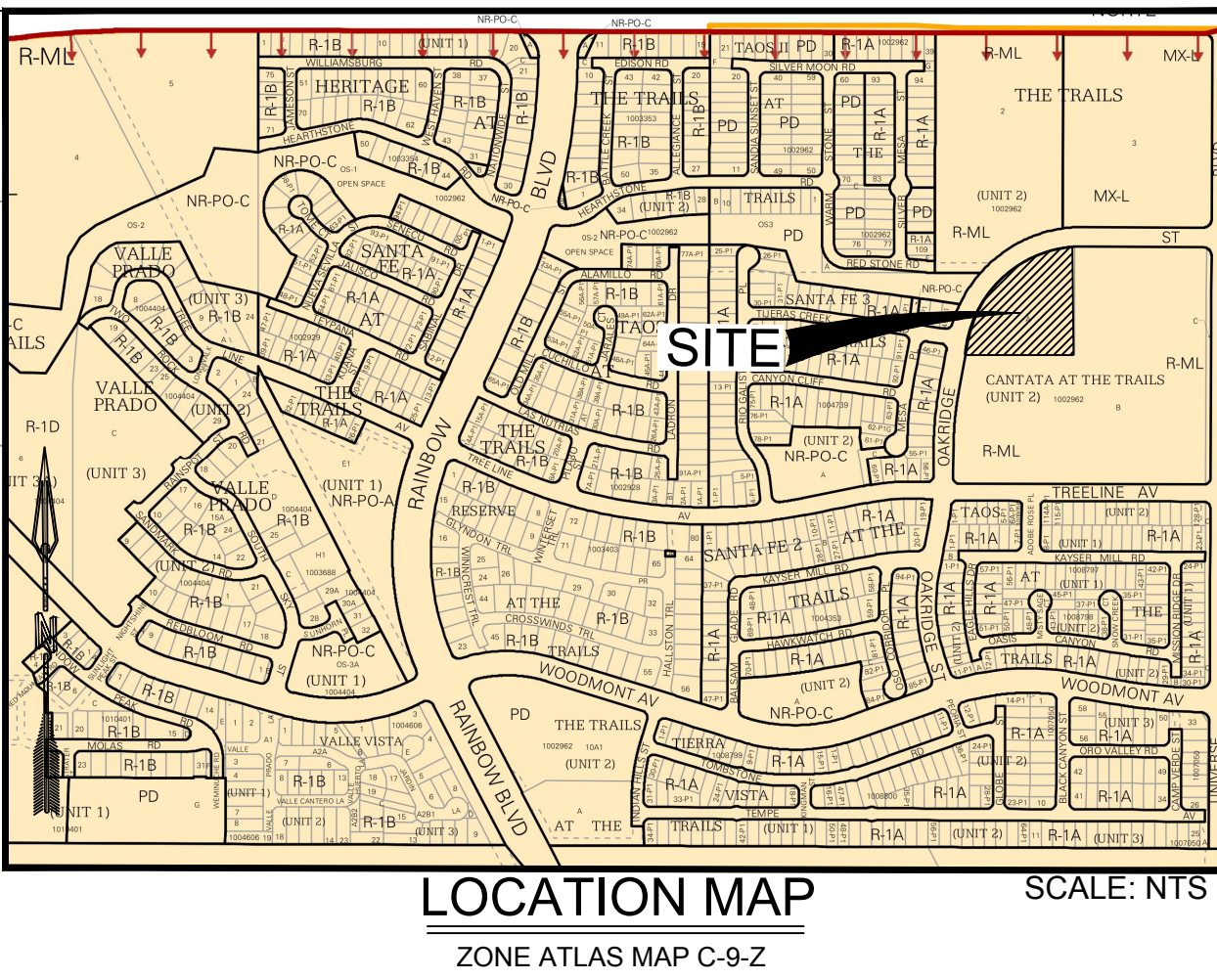
15. A waterblock, 0.87' high, per COA Paving Detail No. 2426, is required at the driveway entrance.

*Response:*

*A waterblock per COA Paving Detail No. 2426 has been included. See revised sheets.*

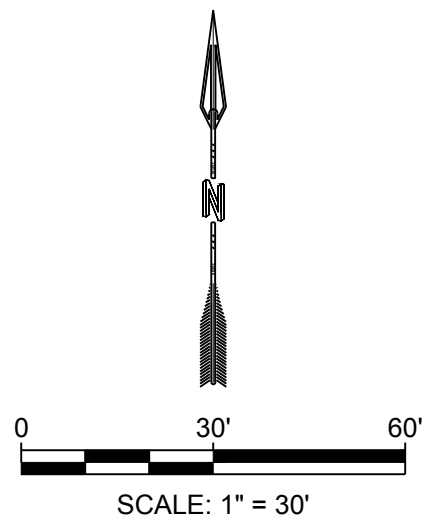


NAME: G:\Shared drives\NMP\Projects\03662 Rainbow Paseo Tract A3.DWG\Sheets\03662 Grading Plan.dwg PLOT DATE: Aug 16, 2019 11:05am



- GENERAL NOTE:
- SEE ARCHITECTURAL SITE PLAN FOR ADDITIONAL SITE DETAILS.
  - ALL PROPOSED ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE SPECIFIED.
  - ALL DRAINAGE INFRASTRUCTURE WILL BE PRIVATE.

- LEGEND
- PROPERTY BOUNDARY
  - 5430 EXISTING MAJOR CONTOUR
  - 5430 EXISTING MINOR CONTOUR
  - 5430 PROPOSED MAJOR CONTOUR
  - 5430 PROPOSED MINOR CONTOUR
  - EXISTING STORM DRAIN
  - PROPOSED STORM DRAIN
  - PROPOSED SPOT GRADE
  - EXISTING SANITARY SEWER MANHOLE
  - PROPOSED STORM DRAIN MANHOLE
  - PROPOSED INLET GRATE



DESIGNED BJE DRAWN BJE CHECKED JS DATE 8.16.2019	REVISION
STAMP SHELDON E. GREER NEW MEXICO 17154 REGISTERED PROFESSIONAL ENGINEER	
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED	
nm811 Know what's below. Call before you dig.	
PROJECT NAME: ADAGIO APARTMENTS	
SHEET TITLE: CONCEPT GRADING PLAN	
SUBMITTED FOR: DRB SITE PLAN	
SHEET NUMBER: C-101	



The following calculations are based on Albuquerque's Development Process Manual, Section 22.2

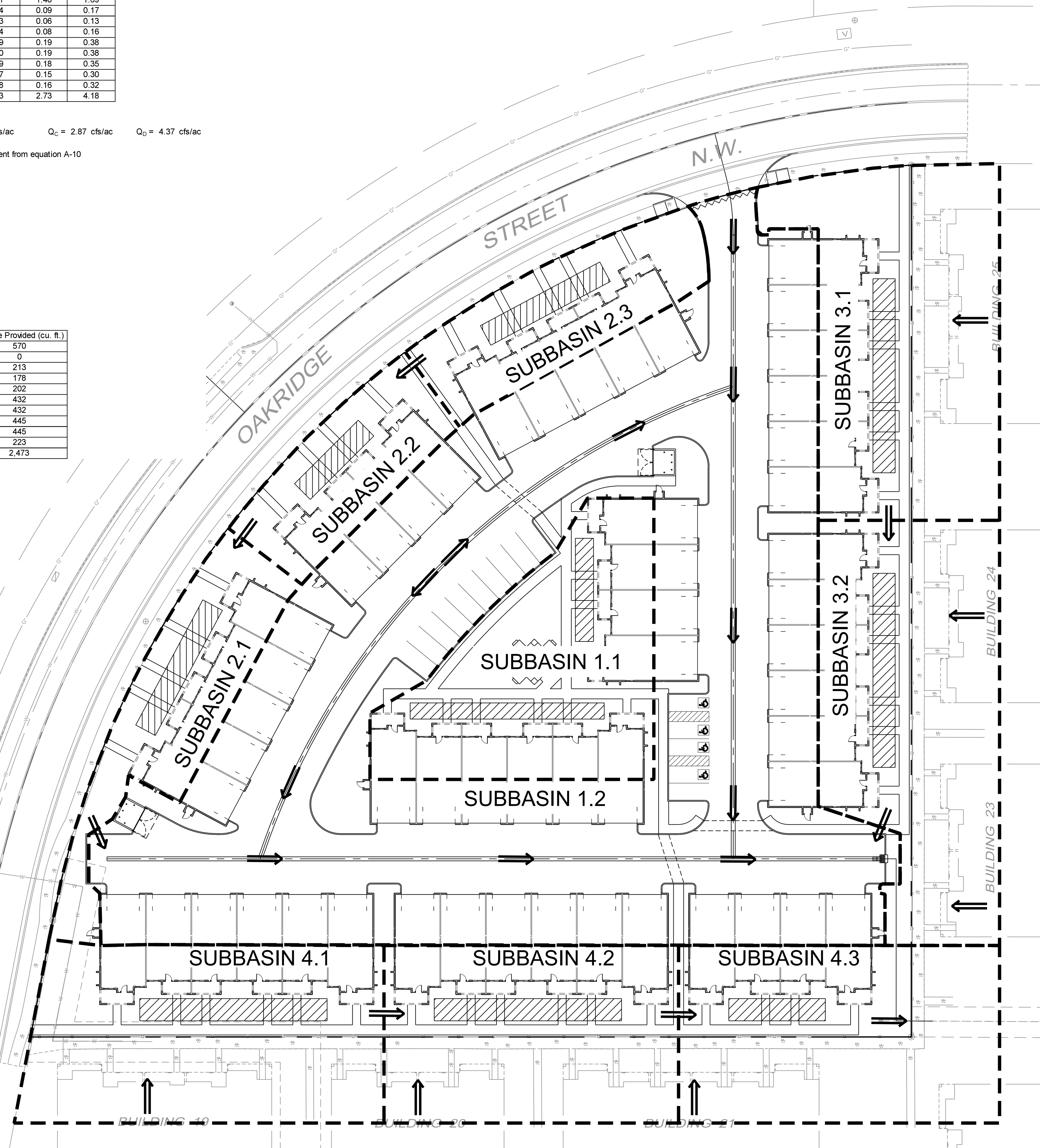
### Treatment Type Areas

Subbasin	Area <sub>1</sub> (a)	Area <sub>2</sub> (a)	Area <sub>3</sub> (a)	Area <sub>4</sub> (a)	Total (a)
Subbasin 1.1	0.00	0.08	0.08	0.15	0.30
Subbasin 1.2	0.00	0.11	0.11	1.48	1.69
Subbasin 1.1	0.00	0.04	0.04	0.09	0.17
Subbasin 2.2	0.00	0.03	0.03	0.06	0.13
Subbasin 2.3	0.00	0.04	0.04	0.08	0.16
Subbasin 3.1	0.00	0.09	0.09	0.19	0.38
Subbasin 3.2	0.00	0.10	0.10	0.19	0.38
Subbasin 4.1	0.00	0.09	0.09	0.18	0.35
Subbasin 4.2	0.00	0.07	0.07	0.15	0.30
Subbasin 4.3	0.00	0.08	0.08	0.16	0.32
Total	0.00	0.73	0.73	2.73	4.18

$$Q_A = 1.29 \text{ cfs/ac} \quad Q_B = 2.03 \text{ cfs/ac} \quad Q_C = 2.87 \text{ cfs/ac} \quad Q_D = 4.37 \text{ cfs/ac}$$

Subbasin	Discharge (cfs)
Subbasin 1.1	1.0
Subbasin 1.2	7.0
Subbasin 2.1	0.6
Subbasin 2.2	0.4
Subbasin 2.3	0.5
Subbasin 3.1	1.3
Subbasin 3.2	1.3
Subbasin 4.1	1.2
Subbasin 4.2	1.0
Subbasin 4.3	1.1
Total	15.5

Subbasin	Volume (cu. ft.)	Volume Provided (cu. ft.)
Subbasin 1.1	370	570
Subbasin 1.2	2,086	0
Subbasin 2.1	213	213
Subbasin 2.2	159	178
Subbasin 2.3	197	202
Subbasin 3.1	249	432
Subbasin 3.2	214	432
Subbasin 4.1	221	445
Subbasin 4.2	188	445
Subbasin 4.3	148	223
Total	3,709	2,473



TRACT A OF THE CANTANA AT THE TRAILS UNIT 2 IS APPROXIMATELY 3.26 ACRES IN THE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO. THE PROPERTY IS LOCATED JUST WEST OF UNIVERSE BOULEVARD BETWEEN TRINIDAD AVENUE AND OAKRIDGE STREET. THE SITE CURRENTLY IS AN UNDEVELOPED LOT. THE PROPOSED PROJECT IS AN APARTMENT COMPLEX. THERE IS NO DESIGNATED 100-YEAR FLOODPLAIN SHOWN ON THE SITE. THE SITE RECEIVES SOME OFFSITE FLOWS FROM NEIGHBORING PROPERTY. THE PLAN IS IN COMPLIANCE WITH THE TLAWS DMP BY TEC, 2015.

HYDROLOGIC CALCULATIONS FOR THE SITE ARE PERFORMED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE TECHNICAL STANDARDS. THE RATIONAL METHOD WAS USED, BASED ON THE 100-YR, 24-HR STORM EVENT, TO CALCULATE PEAK FLOW RATES IN ORDER TO ENSURE ALL FLOW PATHS ARE SUFFICIENT TO CARRY FLOWS. THE REQUIRED DETENTION POND VOLUME WAS CALCULATED BASED ON THE DIFFERENCE BETWEEN PRE AND POST DEVELOPMENT PEAK DISCHARGES. ALL HYDROLOGIC AND HYDRAULIC CALCULATIONS CAN BE FOUND ON THIS SHEET.

THE AREA, IN GENERAL, SLOPES TOWARDS LOW POINT AT CENTER OF PROPERTY AND EVENTUALLY DRAINS TO THE SOUTHEAST AT AN APPROXIMATE SLOPE OF 2% - 4% TO A LOW RETENTION BASIN APPROXIMATELY FOUR FEET DEEP. STORM WATER RUNOFF GENERATED BY TRACT B, CURRENTLY DRAINS TO THE EAST TO A DETENTION BASIN LOCATED ADJACENT TO THE EAST, TRACT B, CURRENTLY DRAINS TO THE EAST TO A DETENTION BASIN ON THE EAST SIDE OF SOUTH-ESTER BOULEVARD. THERE IS AN EXISTING STORM DRAIN CONNECTION NEAR THE SOUTHEAST CORNER OF THE TRACT A PROPERTY BOUNDARY WITHIN A DRAINAGE SEWERAGE MAIN. THE EXISTING DRAINAGE SYSTEM FOR TRACT A DOES NOT HAVE ANY MARKERS INTO THE EXISTING STORM DRAIN PIPING IS LIMITED TO TWO FEET PER SECOND. THE STUDY DRAIN HYDRAULIC ANALYSIS BY BHI ON OCTOBER 2, 2012 FOR CANTATA AT THE TRAILS (C9/D001B).

THE PROPOSED DEVELOPMENT WILL CONSIST OF ASPHALT AND CONCRETE PAVING FOR PARKING AND DRIVING SURFACES AND 52 INDIVIDUAL APARTMENT BUILDINGS. THE BASIN HAS BEEN SPLIT INTO 4 MAIN SUBBASINS.

SUBBASIN 1 IS 1.99 ACRES AND GENERATES 8.0 CFS. THIS SUBBASIN CONSISTS PRIMARILY OF THE RUNOFF GENERATED BY ASPHALT ROAD SURFACE, PARKING LOT, APARTMENT BUILDINGS, AND OPEN SPACE. THE ROADWAY GENERALLY SLOPES SOUTH AND EAST FROM THE PROJECT TO THE 15' PRIVATE DRAINAGE EASEMENT. THE 15' PRIVATE DRAINAGE EASEMENT IS THE LOW POINT AT THE SOUTH-EAST END OF THE PROPERTY. RUNOFF EXITS THE CATCH BASINS AND IS CONVEYED VIA 18" STORM DRAIN PIPING TO THE SOUTH-EAST AND CONNECTS TO AN EXISTING 18" STORM DRAIN LOCATED WITHIN THE 15' PRIVATE DRAINAGE EASEMENT. THE FLOW FROM THIS SUB-BASIN WILL BE REDUCED FROM 8.0 CFS TO 5.6 CFS VIA DETENTION PONDING AND FLOW ATTENUATION AT THE PONDING TOWARD TO SATISFY THE 10 CFS LIMITATION DISCHARGING TO THE CANTATA STORM DRAIN.

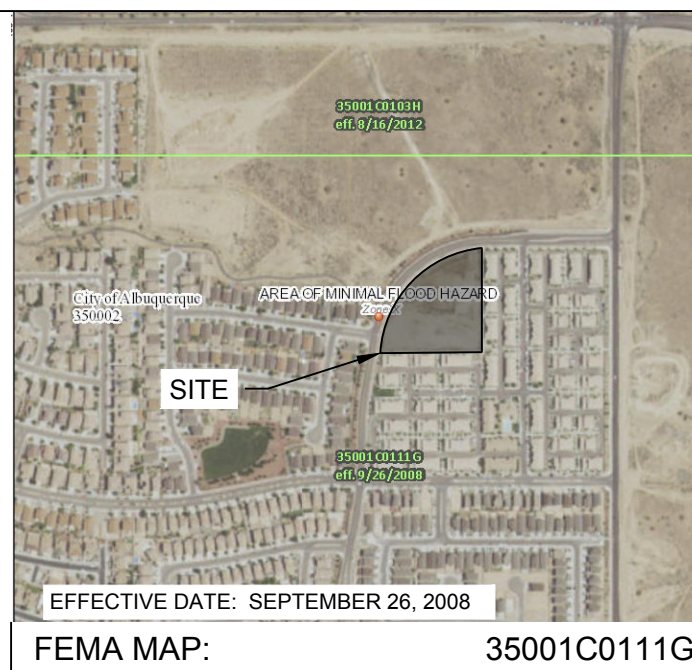
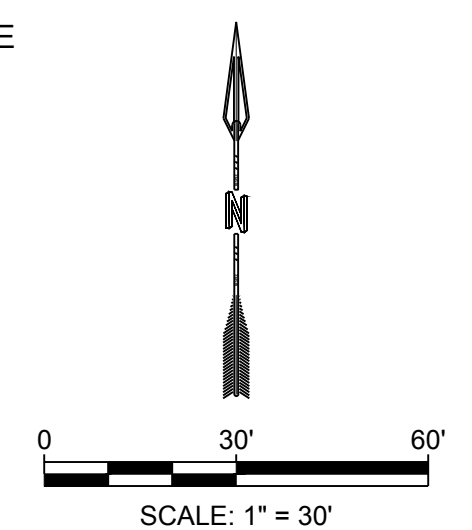
SUBBASIN 2 IS 0.46 ACRES AND GENERATES 1.6 CFS. THIS SUBBASIN CONSISTS OF HALF THE ROOF AREA OF THE PROPOSED APARTMENT BUILDINGS, LANDSCAPING, AND RETENTION BASINS. THIS AREA WILL FLOW WEST VIA SWALES AND DISCHARGE INTO SUBBASIN 1.


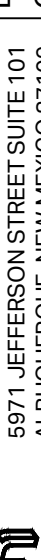
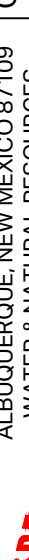
SUBBASIN 3 IS 0.76 ACRES AND GENERATES 2.6 CFS. OF THE 0.76 ACRES, 0.39 ACRES IS OFF-SITE. THIS SUBBASIN CONSISTS OF HALF THE ROOF AREA OF THE PROPOSED APARTMENT BUILDINGS, LANDSCAPING, AND RETENTION BASINS. THIS AREA WILL FLOW SOUTH VIA SWALES AND DISCHARGE INTO SUBBASIN 1.

SUBBASIN 4 IS 0.97 ACRES AND GENERATES 3.3 CFS. OF THE 0.97 ACRES, 0.52 ACRES IS OFF-SITE. THIS SUBBASIN CONSISTS OF HALF THE ROOF AREA OF THE PROPOSED APARTMENT BUILDINGS, LANDSCAPING, AND RETENTION BASINS. THIS AREA WILL FLOW EAST VIA SWALES AND DISCHARGE TO THE EXISTING STORM DRAIN.

THE WATER QUALITY TABLE AT THE TOP LEFT OF THIS SHEET SUMMARIZES THE WATER QUALITY VOLUMES REQUIRED AND PROVIDED. SUFFICIENT PONDING HAS BEEN PROVIDED FOR SUBBASINS 2 - 4 IN THE FRONT YARDS THE UNITS. THE PONDING REQUIREMENTS FOR SUBBASINS 3 & 4 ONLY INCLUDE THE ON-SITE STORMWATER VOLUME. THE OWNER HAS ELECTED TO PAY THE PAYMENT IN LIEU FOR THE STORMWATER QUALITY VOLUME OF 2,086 CF. THIS PAYMENT AMOUNT = 2,086 CF x \$8/CF = \$16,688.00.

— — — — —	PROPERTY BOUNDARY
- - - - 5430 - - - -	EXISTING MAJOR CONTOUR
- — 5430 — -	EXISTING MINOR CONTOUR
⊙	EXISTING SANITARY SEWER MANHOLE
Ⓢ	PROPOSED STORM DRAIN MANHOLE
■	PROPOSED INLET GRATE
— ■ ■ ■ ■ —	SUBBASIN BOUNDARY

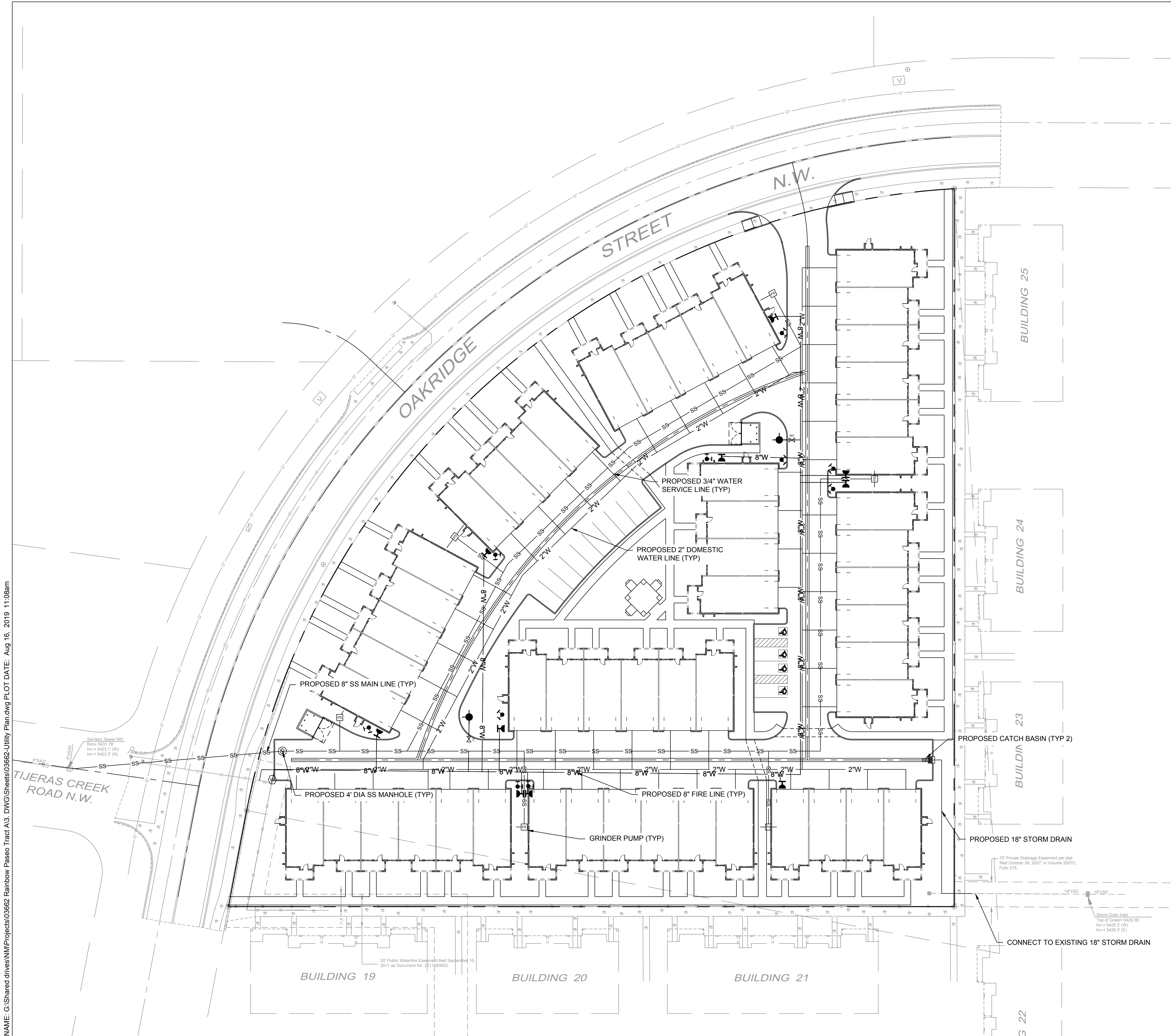


DESIGNED <b>RPE</b>	 <b>RESPEC</b> 5971 JEFFERSON STREET SUITE 101 ALBUQUERQUE, NEW MEXICO 87109 WATER & NATURAL RESOURCES WWW.RESPEC.CO.NM 505.233.9718	REVISION
DRAWN <b>RPE</b>		
CHECKED <b>JS</b>		
DATE 8.16.2019		
STAMP 		
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
		
SHEET NUMBER:	<b>C-102</b>	
SUBMITTED FOR:	DRB SITE PLAN	
SHEET TITLE:	<b>CONCEPT DRAINAGE PLAN</b>	
PROJECT NAME:	<b>ADAGIO APARTMENTS</b>	



NAME: G:\Shared drives\NMP\Projects\03662 Rainbow Paseo Tract A3.DWG\Sheets\03662 Utility Plan.dwg PLOT DATE: Aug 16, 2019 11:08am

© Copyright 2019 RESPEC - All Rights Reserved

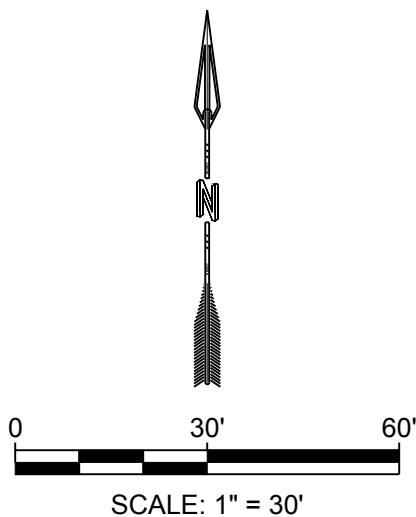


GENERAL NOTES:

- TYPE RBPA BACKFLOW PREVENTERS FOR ALL PROPOSED PRIVATE WATER LINES WILL BE PROVIDED INTERNAL TO EACH PROPOSED BUILDING PER COA STD. DWG. 2385. THE BACKFLOW PREVENTERS WILL BE THE SAME SIZE AS THE TAP/CONNECTION AT THE MAIN LINE.
- THE PRIVATE SANITARY SEWER WILL BE A PRESSURE SYSTEM WITH A GRINDER PUMP FOR EACH BUILDING. THE PRESSURE SYSTEM WILL DISCHARGE TO MH#1 AT THE SOUTHWEST CORNER OF THE PROPERTY AND GRAVITY FLOW ACROSS OAKRIDGE STREET AND CONNECT TO THE EXISTING MANHOLE IN TIERAS CREEK ROAD.

LEGEND

- |             |                                 |
|-------------|---------------------------------|
| ---         | PROPERTY BOUNDARY               |
| — W —       | EXISTING WATER LINE             |
| — 2"W —     | PROPOSED WATER LINE             |
| — 8"W —     | 8" FIRE LINE                    |
| — SS — SS — | EXISTING SANITARY SEWER LINE    |
| — SS — SS — | PROPOSED SANITARY SEWER LINE    |
| ---         | EXISTING STORM DRAIN            |
| ---         | PROPOSED STORM DRAIN            |
| ⊙           | PROPOSED SANITARY SEWER MANHOLE |
| ⊙           | PROPOSED STORM DRAIN MANHOLE    |
| ■           | PROPOSED INLET GRATE            |
| ⌵           | PROPOSED GATE VALVE             |
| ⌵           | PROPOSED WALL INDICATOR VALVE   |
| ⌵           | PROPOSED FDC                    |
| ⌵           | PROPOSED 6" GATE VALVE          |
| PS          | PROPOSED GRINDER PUMP           |



DESIGNED RPE	6971 JEFFERSON STREET SUITE 101 ALBUQUERQUE, NM 87109 WWW.RESPEC.COM 505.253.9718	REVISION
DRAWN RPE		
CHECKED JS		
DATE 8.16.2019		
STAMP		
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED		
PROJECT NAME:	ADAGIO APARTMENTS	
SHEET TITLE:	CONCEPTUAL UTILITY PLAN	
SUBMITTED FOR:	DRB SITE PLAN	
SHEET NUMBER:	C-103	





TREASURY DIVISION DAILY DEPOSIT

Transmittals for:  
PROJECTS Only

Payment In-Lieu for Storm Water Quality  
Volume Requirement

CASH COUNT	AMOUNT	ACCOUNT NUMBER	FUND NUMBER	BUSINESS UNIT	PROJECT ID	ACTIVITY ID	AMOUNT
TOTAL CHECKS	\$ 14,613.00	461615	305	PCDMD	24_MS4	7547210	\$ 14,613.00
TOTAL AMOUNT						TOTAL DEPOSIT	<b>\$14613.00</b>

Hydrology#: C09D014 Name: Adagio Apt's 64,469sf imp  
Payment In-Lieu For Storm Water Quality  
Volume Requirement

Address/Legal Description: Woodmont & Oakland NW  
TR A, Cantata at the Trails Unit 2

DEPARTMENT NAME: Planning Department/Development Review Services, Hydrology

PREPARED BY Dana Peterson PHONE 924-3695

BUSINESS DATE 8/28/19

DUAL VERIFICATION OF DEPOSIT   
EMPLOYEE SIGNATURE

AND BY \_\_\_\_\_  
EMPLOYEE SIGNATURE

REMITTER: \_\_\_\_\_

AMOUNT: \_\_\_\_\_

BANK: \_\_\_\_\_

CHECK #: \_\_\_\_\_ DATE ON CHECK: \_\_\_\_\_

The Payment-in-Lieu can be paid at the Plaza del Sol Treasury, 600 2<sup>nd</sup> St. NW. **Bring three copies of this invoice to the Treasury** and provide a copy of the receipt to Hydrology, Suite 201, 600 2<sup>nd</sup> St. NW, or e-mail with the Hydrology submittal to [PLNDRS@cabq.gov](mailto:PLNDRS@cabq.gov).